Teamwork Makes the Dream Work…It's Not Just a Cliché

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Author Biography

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Introduction

Amid the onset of the Coronavirus pandemic, schools scrambled to abruptly shift their courses online; even the most adept educators had to adjust their teaching strategies. As faculty transitioned to teaching online synchronous classes, many students were multitasking, unwilling to turn on their cameras and reluctant to participate in the online discussions. Consequently, professors were unable to utilize non-verbal cues to gauge whether students were attentive and comprehending the material.

In the spring 2020, we were scheduled to teach an 8-week face-to-face MBA statistics course once a week for 4 ¼ hours. The course was converted to a synchronous online format in response to the pandemic. Research shows that students typically perform worse in online quantitative courses as compared with face-to-face (or hybrid) non-quantitative courses (Lightner & Lightner-Laws, 2016). We were immediately tasked with developing an engaging online course that spurred active participation in the teaching/learning process. In this essay, we describe a learning activity that addresses student engagement and team learning in a synchronous online course.

Goal of Activity

Team-based learning and competitions help address many issues that stymie student success in an online course (Espey, 2018; Darby & Lang, 2019). We sought to keep students engaged and meet the course learning objectives (CLOs) by offering incentives to win team competitions. We utilized a cooperative learning environment where teams competed for bonus points each week.

Description of Assignment

A case study from our textbook (Albright & Winston, 2020) entitled *Harrigan University Admissions* was modified so that it could easily be used for an in-class group assignment. The assignment is displayed in ***Figure 1*** and an excerpt from the Excel data file is shown in ***Figure 2***. Students were asked to complete the entire assignment before the end of class. The CLOs assessed in this assignment were:

CLO 1) Students should be able to use Excel to calculate and display numerical, tabular and graphical descriptions of data.

CLO 2) Students should be able to use inferential statistics to solve business problems.

Description of Activity

We created a Kahoot game and breakout rooms in MS Teams so that students could complete the assignment. See Appendix I for a guide to creating a Kahoot game.

BUSA 5200 Homework

Har University is a university in the Midwest that attempts to attract the highest quality students. It has gathered data on 178 applicants who were accepted by Har over the past several years.

The variables (columns from Excel spreadsheet) from the Har data file is as follows:

Accepted: whether the applicant accepts Har's offer to enroll
MainRival: whether the applicant enrolls at Har's main rival university
HSClubs: number of high school clubs applicant served as an officer
HSSports: number of varsity letters applicant earned
HSGPA: applicant's high school GPA
HSPctile: applicant's percentile (in terms of GPA) in his or her graduating class
HSSize: number of students in applicants' graduating class
SAT: applicants' combined SAT score
Combined Score: a combined score for the applicant used by Har University to rank applicants.

PROBLEM 1
Use Excel to find:

i) the proportion of all acceptable applicants who accept Har's invitation to enroll.
ii) the proportion of all acceptable applicants with a combined score less than 330,
iii) the proportion of applicants with a combined score between 330 and 375.
iv) for the proportion applicants with a combined score greater than 375.

PROBLEM 2
Find an 88% confidence interval for the proportion of all acceptable applicants who accept Har's invitation to enroll.

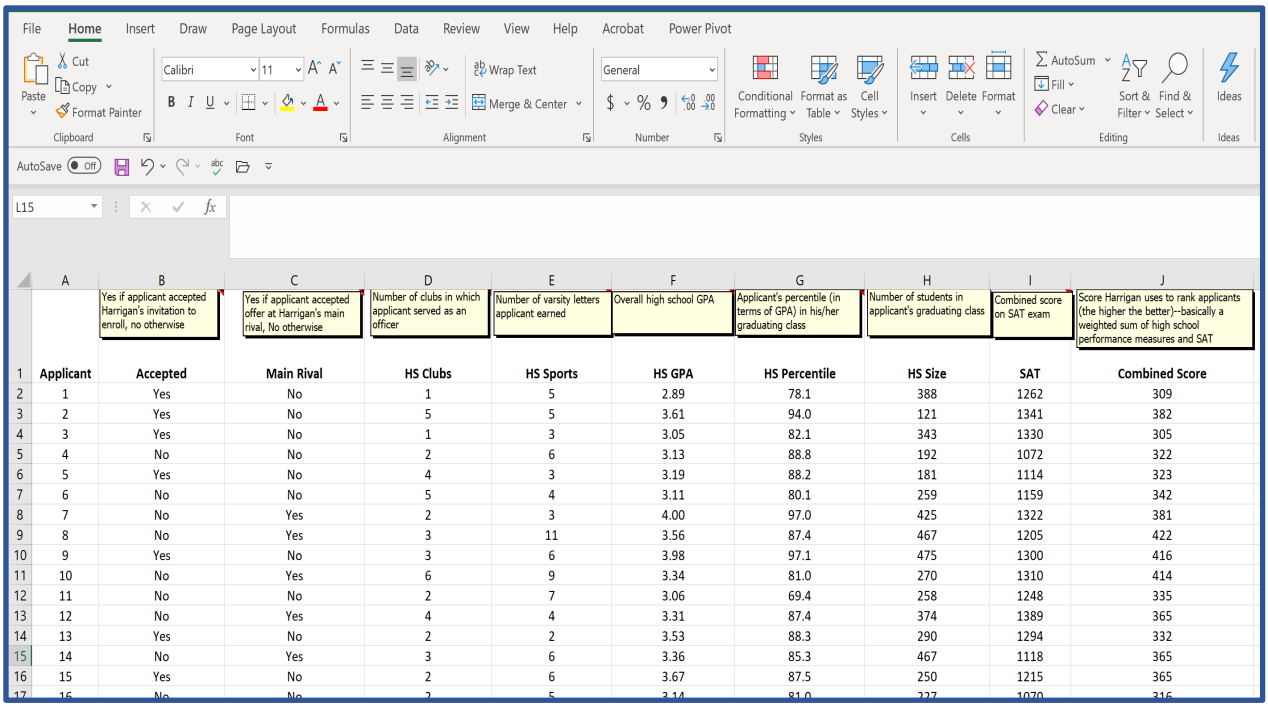
PROBLEM 3
Find an 92% confidence interval for the proportion of all acceptable applicants with a combined score less than 330. Interpret this confidence interval in the context of this problem.

PROBLEM 4
Find an 96% confidence interval for the proportion of applicants with a combined score between 330 and 375. Interpret this confidence interval in the context of this problem.

PROBLEM 5
Find an 81% confidence interval for the proportion applicants with a combined score greater than 375. Interpret this confidence interval in the context of this problem.

PROBLEM 6
Use techniques we have covered in the course to get a better understanding of the applicants at Har University. USE SEVERAL TECHNIQUES AND EXPLAIN your findings.

Figure 1: Confidence Interval (CI) assignment



	A	B	C	D	E	F	G	H	I	J
		Yes if applicant accepted Harrigan's invitation to enroll, no otherwise	Yes if applicant accepted offer at Harrigan's main rival, No otherwise	Number of clubs in which applicant served as an officer	Number of varsity letters applicant earned	Overall high school GPA	Applicant's percentile (in terms of GPA) in his/her graduating class	Number of students in applicant's graduating class	Combined score on SAT exam	Score Harrigan uses to rank applicants (the higher the better)--basically a weighted sum of high school performance measures and SAT
1	Applicant	Accepted	Main Rival	HS Clubs	HS Sports	HS GPA	HS Percentile	HS Size	SAT	Combined Score
2	1	Yes	No	1	5	2.89	78.1	388	1262	309
3	2	Yes	No	5	5	3.61	94.0	121	1341	382
4	3	Yes	No	1	3	3.05	82.1	343	1330	305
5	4	No	No	2	6	3.13	88.8	192	1072	322
6	5	Yes	No	4	3	3.19	88.2	181	1114	323
7	6	No	No	5	4	3.11	80.1	259	1159	342
8	7	No	Yes	2	3	4.00	97.0	425	1322	381
9	8	No	Yes	3	11	3.56	87.4	467	1205	422
10	9	Yes	No	3	6	3.98	97.1	475	1300	416
11	10	No	Yes	6	9	3.34	81.0	270	1310	414
12	11	No	No	2	7	3.06	69.4	258	1248	335
13	12	No	Yes	4	4	3.31	87.4	374	1389	365
14	13	Yes	No	2	2	3.53	88.3	290	1294	332
15	14	No	Yes	3	6	3.36	85.3	467	1118	365
16	15	Yes	No	2	6	3.67	87.5	250	1215	365

Figure 2: Data file for CI assignment

Creating and using breakout rooms

After completing the traditional lecture and Q&A, we created breakout rooms for the students in MS Teams. Breakout rooms should consist of 3-4 students. The goal is to create an environment where students feel open to ask questions and assist each other with the teaching/learning process. Each group selected a team captain who input answers for the entire team within the Kahoot game. The team who wins the Kahoot game is awarded the bonus points for each class.

Reflections of Activity

The main goal of using these activities is to develop a path for students to easily learn the course material and participate in their online classes. The online activities allow students to work in small groups to complete assignments. The team Kahoot competitions break up the monotony of a typical lecture. These contests also incentivize students to remain focused and learn the concepts, so that they can earn bonus points.

Assessment results indicate that breakout groups and Kahoot significantly improved student achievement. Initially an assessment showed that over 62% of the students failed to meet the proficiency threshold in the stated learning objectives. After the new methods were utilized, the failure rate dropped from 62% to approximately 9%. We attributed this improvement to the new activities, which ultimately helped increase engagement and allowed students to reach learning goals. Teamwork makes the dreamwork…it's not just a cliché. It is a recipe for helping our students succeed in this digital age of online classes by improving online learning and engagement.

References

Albright, C. and Winston, W. (2020). Business Analytics: Data Analysis & Decision Making (7th ed.). Cengage Learning,

Darby, F. and Lang, J. M. (2019). Small Teaching Online: Applying Learning Science in Online Classes. San Francisco, CA : Jossey-Bass (A Wiley Brand).

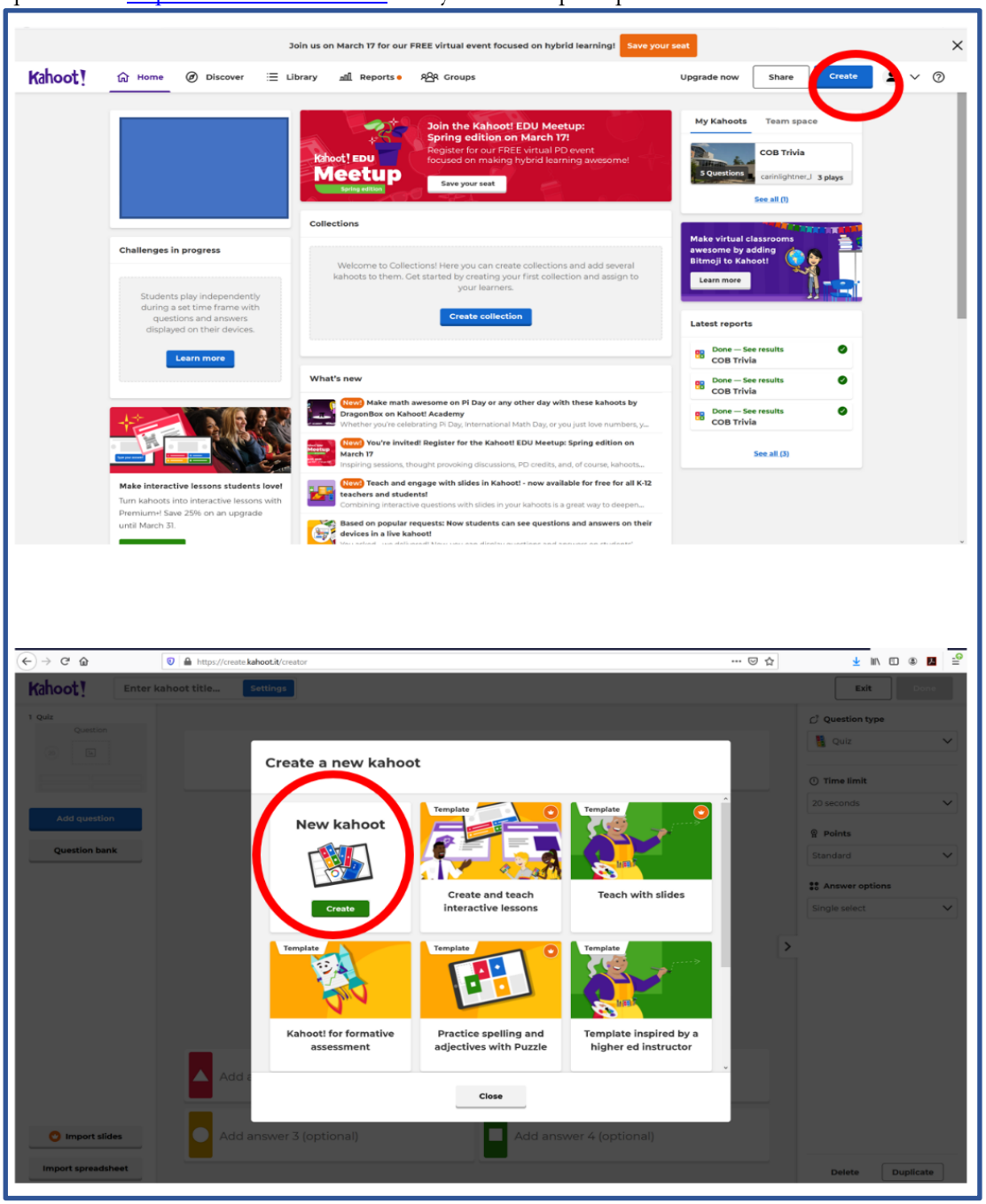
Espey. M. (2018). Enhancing Critical Thinking using Team-Based Learning. Higher Education Research & Development, 37 (1), 15-29. DOI: 10.1080/07294360.2017.1344196

Lightner, C. and Lightner-Laws, C. (2016). A Blended Model: Simultaneously Teaching a Quantitative Course Traditionally, Online and Remotely. Interactive Learning Environments, 24(1), 224-238.

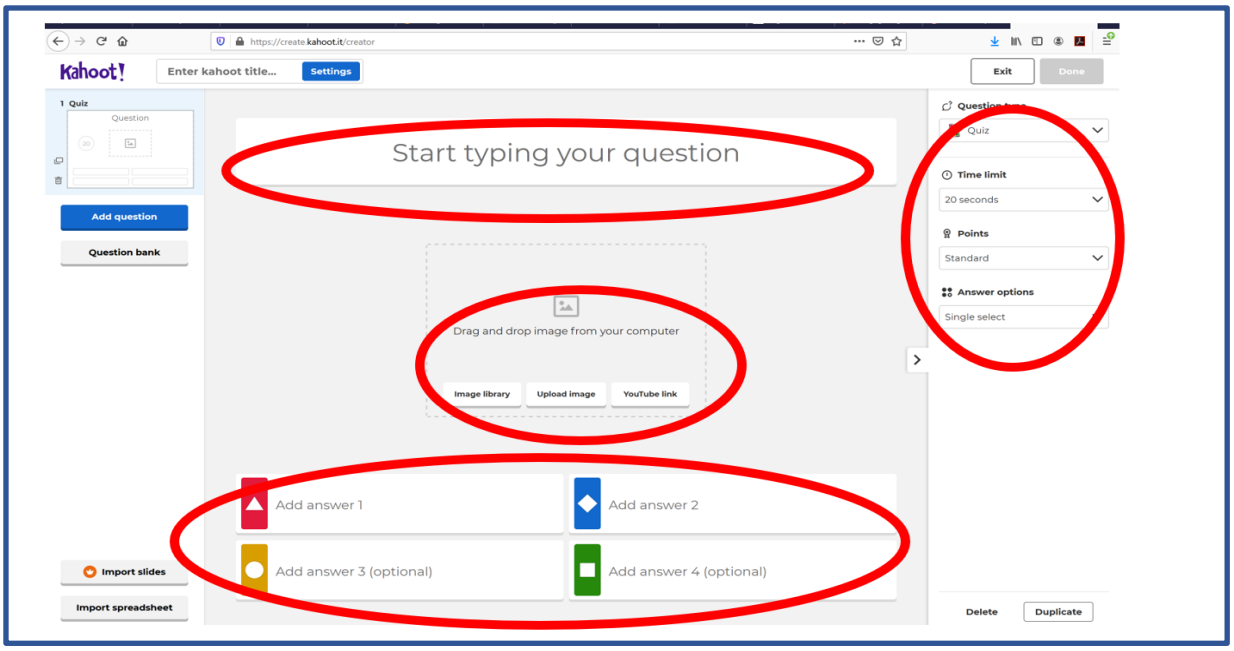
Appendix I

To create a Team Kahoot game follow the steps below:

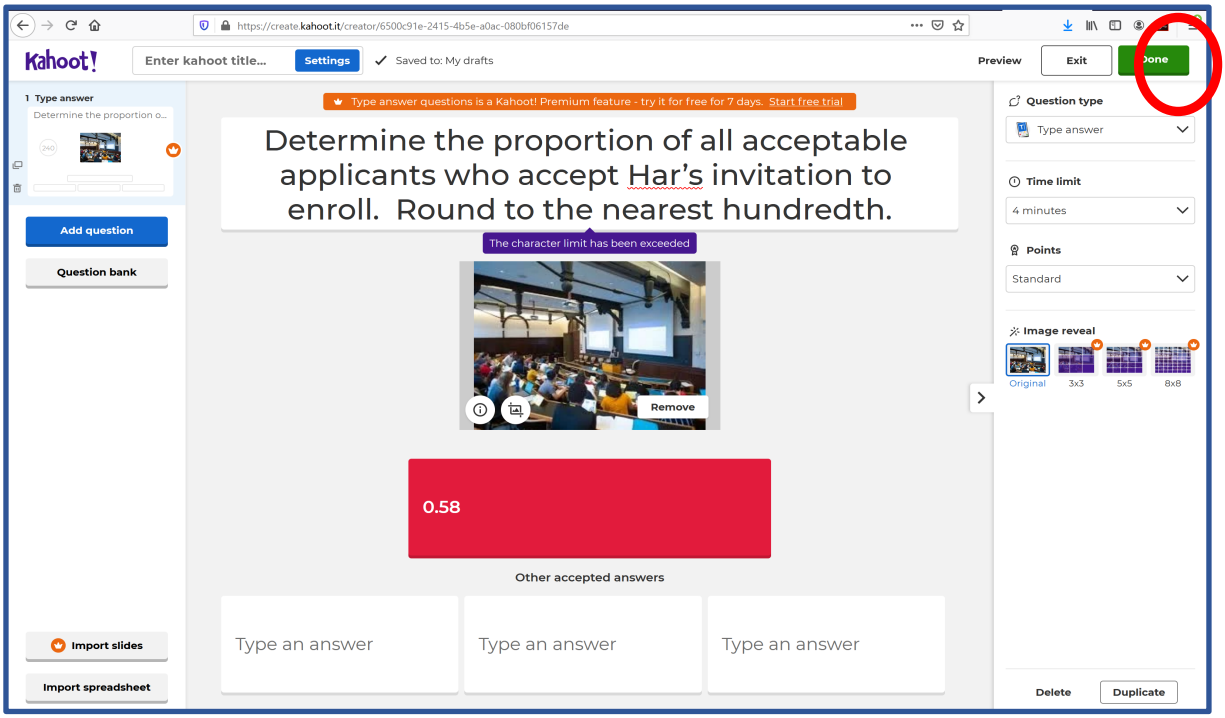
Step 1. Go to https://create.kahoot.it/ and you will be prompted to create a Kahoot account.



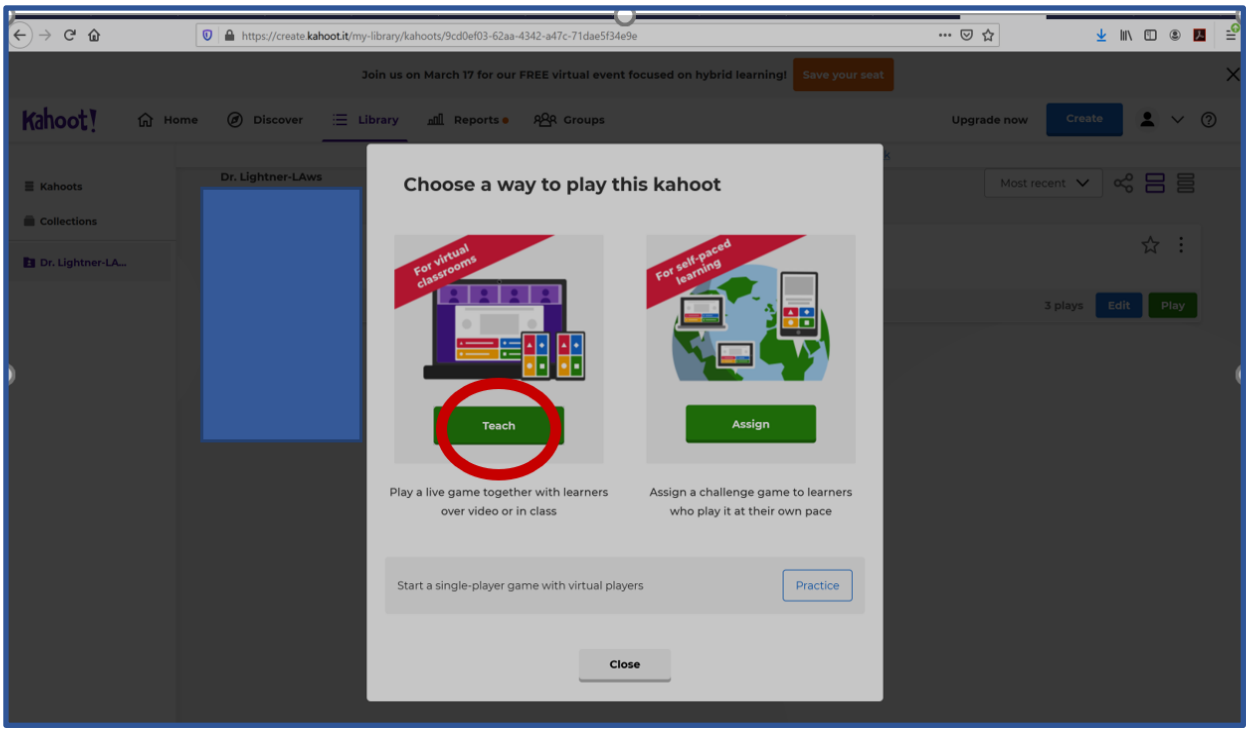
Step 2. After creating an account, click on Create to start making the trivia game.



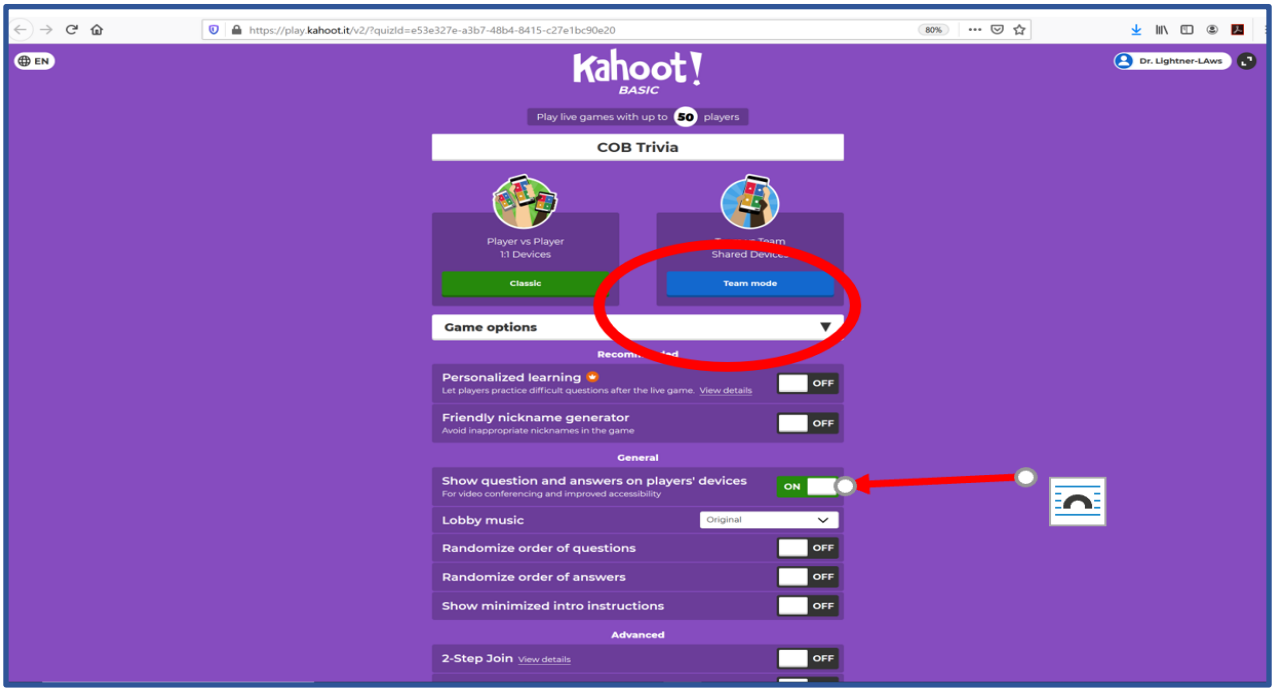
Step 3. Type the Kahoot questions, add photos, change the type of question (multiple choice, True-False, type answer etc.), change the point values, specify the time allotted to answer questions and enter the answers.



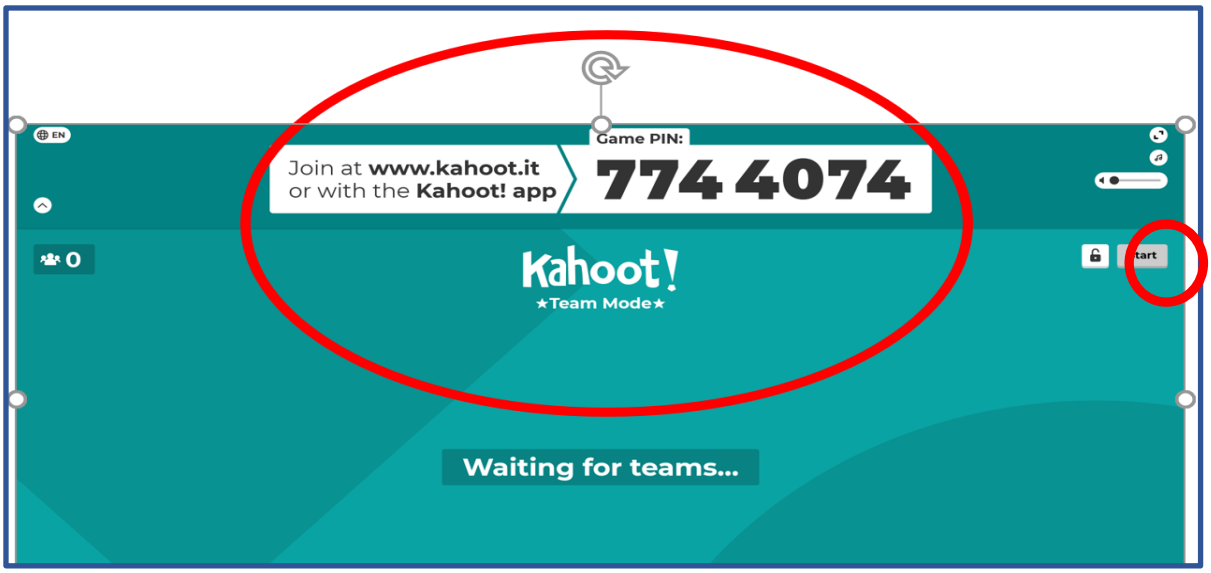
Step 4. Add all questions for the assignment and click Done. Then click Play.



Step 5. Choose whether students play the game live by selecting Teach or let them play at their own pace by selecting Assign.



Step 6. Select the Team mode and change the General Settings, so that questions and answers are displayed on players' devices.



Step 7. Students need to go to www.kahoot.it. They will be prompted to enter the Game Pin, Team name and Team members. After all teams have logged in, click Start.